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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/622,173	08/14/2000	Hartmut Hibst	48770	9890
26474	7590	04/03/2006	EXAMINER	
NOVAK DRUCE DELUCA & QUIGG, LLP 1300 EYE STREET NW SUITE 400 EAST WASHINGTON, DC 20005			NECKEL, ALEXA DOROSHENK	
			ART UNIT	PAPER NUMBER
			1764	

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/622,173

Applicant(s)

HIBST ET AL.

Examiner

Alexa D. Neckel

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 9, 2006 has been entered.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1-4, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alagy et al. (4,780,196).

With respect to claims 1 and 22, Alagy et al. discloses an apparatus which comprises a metallic tube bundle reactor/heat exchanger (fig. 1, 3 and 4) which has parallel through-channels in the form of tubes (D), surrounded by a shell (see fig. 1 and 3) through which a heating or cooling medium can be conducted (via 2, F and 4) and there are any number of tubes (D)(col. 55, lines 27-29) and wherein the tubes (D) run through the body between two orifices situated on the body surface, permitting passage of fluid through the body (see figures 3 and 4).

Since Alagy et al. discloses that any number of tubes (D) can be in the device as required to perform the desired operation, it would have been obvious to one of ordinary

Art Unit: 1764

skill in the art at the time the invention was made to have 10, 100, 1000, or 10,000 tubes as needed.

It is noted that the material worked upon does not limit an apparatus claim, MPEP 2115, therefore the materials (heterogeneous catalyst) within the channels do not further limit the apparatus claim.

With respect to claims 2 and 4, it is noted that the material worked upon does not limit an apparatus claim, MPEP 2115, therefore the materials (heterogeneous catalyst) within the channels do not further limit the apparatus claim.

With respect to claim 3, Alagy et al. further discloses wherein the tubes have a diameter of 3.4 to 34 mm (col. 5, lines 30-35).

4. Claims 1-4, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Primack et al. (5,087,784).

With respect to claims 1 and 22, Primack et al. discloses an apparatus which comprises a metallic tube bundle reactor/heat exchanger (col. 7, lines 26-28) which has parallel through-channels in the form of tubes (30), surrounded by a shell (4) through which a heating or cooling medium can be conducted (via 21, col. 7, lines 10-12) and there are any number of tubes (30)(col. 7, lines 24-26) and wherein the tubes (30) run through the body between two orifices situated on the body surface, permitting passage of fluid through the body (see figure).

Since Primack et al. discloses that any number of tubes (30) can be in the device as required to perform the desired operation, it would have been obvious to one of

Art Unit: 1764

ordinary skill in the art at the time the invention was made to have 10, 100, 1000, or 10,000 tubes as needed.

It is noted that the material worked upon does not limit an apparatus claim, MPEP 2115, therefore the materials (heterogeneous catalyst) within the channels do not further limit the apparatus claim.

With respect to claims 2 and 4, it is noted that the material worked upon does not limit an apparatus claim, MPEP 2115, therefore the materials (heterogeneous catalyst) within the channels do not further limit the apparatus claim.

With respect to claim 3, Primack et al. further discloses wherein the tubes have a diameter of 12 to 76 mm (col. 7, lines 19-21).

Response to Arguments

35 USC 112

The rejection of claim 22 under 35 USC 112, second paragraph is withdrawn due to applicant's amendment to the claims.

35 USC 103

Applicants amended claim 1 to incorporate the limitations of claim 21, as such the rejection in view of De Witt et al. no longer applies.

Applicant argues that Alagy does not provide for tubes "surrounded by a shell through which a heating or cooling medium can be conducted".

The examiner respectfully disagrees. Even though the heat exchange medium flows through tubes (F), these tubes are within the shell and therefore meet the limitation of the claims.

Applicant argues that Alagy does not disclose a metallic tube bundle/heat exchanger because the reactor is made from a ceramic material.

The examiner respectfully disagrees for two reasons. Firstly, the claim does not specifically recite that the heat exchanger must be metallic, only the tube-bundle reactor. Secondly, even if one were to interpret the claim as requiring a heat exchanger which is also metallic, Alagy discloses wherein the ceramic can be cordierite (col. 5, lines 56-61). Cordierite comprises iron and therefor is metallic.

Applicant continues to argue that the catalyst must be given weight in the claims as it is an element of the invention itself.

The examiner continues to respectfully disagree. MPEP 2115 recites: "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Furthermore, "[i]nclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims." *In re Young*, 75 F.2d 996, 25 USPQ 69 (CCPA 1935) (as restated in *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)). In this case, the array of catalyst and/or their precursors relate to the contents of the apparatus during its intended operation, the testing of several different catalysts.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexa D. Neckel whose telephone number is 571-272-

Art Unit: 1764

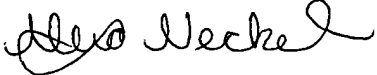
1446. The examiner can normally be reached on Monday - Thursday from 9:00 AM - 7:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alexa D. Neckel
Primary Examiner
Art Unit 1764

March 29, 2006


ALEXA DOROSHENK NECKEL
PRIMARY EXAMINER